

ABSTRACT

Piezo oscillators having a quick start-up circuit, which applies a start-up quickening voltage to the piezo resonator only for a predetermined length of time after the application of power supply voltage, added to a piezo oscillating circuit. The start-up time taken for the piezo oscillators to reach the steady-estate oscillation from the non-oscillating state can be significantly shortened. The phase noise characteristics and frequency stability characteristics are not affected, since the start-up quickening voltage is removed after the predetermined length of time.